

## **Scoping a Green Rental Housing Tool**

### **Summary of the Project**

In many cities, the housing information available makes it difficult for renters to consider sustainability concerns such as utility usage, access to transportation, or the availability of recycling facilities, and to change their behavior accordingly. The purpose of the proposed project is to develop a scoping document and, if appropriate, a Request for Qualifications to create a rental housing tool intended to (1) help renters, initially college students, consider sustainability factors alongside other factors (such as rent, access to laundry facilities, etc.) when making housing decisions and (2) to help landlords grasp the value of sustainability investments as a marketable asset. The proposed project does not seek to develop the tool itself at this time, but rather to develop consensus among partner cities on the functions it should include, to assess available data to enable these functions, and to identify resources (financial, technical, legal, etc.) that will enable the development of the tool itself. The tool will ultimately be an interactive website, associated smart phone app, or other combination to enable participating cities to share information and create markets of smarter, more sustainability-minded renters. In short, the project seeks to answer the following question: Is there a tool or set of tools that can help renters find and promote green rental housing in multiple cities?

### **Participating Cities**

The cities of Bloomington, Indiana and Ann Arbor, Michigan will act as the project leads, with other cities providing leadership advice and input, assisting with data gathering and otherwise engaging in the project as partners. There are 14 USDN Partner Cities who represent large, medium and small cities and include almost half a million students as potential customers. We believe that this active participation and interest from a diverse set of cities strengthens this application and demonstrates a likelihood of success.

<b>USDN Partner City</b>	<b>Total population</b>	<b>Student Population</b>
Albany, NY	97,856	29,000
Ann Arbor, MI	114,000	40,000
Austin, TX	820,000	50,000
Berkeley, CA	112,000	40,000
Bloomington, IN	80,000	42,000
Burlington, VT	42,000	14,689
Columbia, MO	108,500	33,000
Dearborn, MI	98,000	31,000
Evanston, IL	75,000	20,000
Fayetteville, AR	75,000	25,000
Iowa City, IA	70,000	32,000
Lawrence, KS	87,000	30,000
Madison, WI	236,000	38,000
Oklahoma City, OK	591,967	39,000
<b>Totals</b>	<b>2,607,323</b>	<b>463,689</b>

### **Grant Amount Requested**

We are requesting \$28,000 to hire a temporary staff person to act as Project Manager and for travel.

### **Purpose (problem or opportunity addressed)**

Most renters are not aware of the full costs of housing, including housing rent, energy and other utilities, and transportation. In many college towns, the rental population is dominated by students, most of whom have never lived on their own at the time they sign their first lease. While some resources exist to guide students when selecting a rental property, these resources rarely incorporate sustainability concerns such as energy use, water use, the availability of recycling services, or access to public transit or bike infrastructure.

This has two significant negative effects. First, it means that sustainability concerns are often not apparent until after the student has moved in, usually under a year lease. Second, it makes it difficult to communicate the value of sustainability to landlords because prospective tenants do not articulate it as a need.

We believe there is an opportunity to develop an online tool and smart-phone application that can serve multiple cities to share information on the full cost of housing and begin a stronger demand-side approach to energy efficiency and other investments that complement other policies implemented in each city.

### **Proposed Product**

The proposed product is a significant research effort that culminates in a scoping document which will detail (1) the features and functions of a sustainable rental housing tool and (2) the feasibility of developing such a tool to serve the partner cities and, eventually, all interested USDN members and non-member cities. The current proposal does not seek to actually develop software or other tools at this time, but instead lays the groundwork for future development of such a tool.

A scoping document is necessary as an intermediate step for two reasons. First, cities already maintain some of the data that would be used to create the tool, but the quality and format is varied. The project would draw on the technical expertise at our university affiliates and others to determine how existing information could be made compatible.

Second, before investing resources into development of the tool, we want to come to consensus on the information to include and the basic functionality to ensure that the tool will serve both USDN members and users (particularly students). To meet the end goal of changing individual behavior by maximizing access to information, the resulting tool must be easy to use, easy to maintain, and serve a market niche.

The scoping document will detail the results of interviews and communication with participating and other interested cities as well as broader stakeholders and other sources of expertise. The document will assess demand for the tool, identify information that should and could be included, describe the challenges involved in developing a common tool useful to all partner cities, recommend the best potential formats (e.g., web, mobile app) for the tool, and recommend strategies to develop the tool (in terms of ownership, technology, funding, etc.). We also hope to explore opportunities to monetize the product (e.g., by selling the app) to support USDN and sustainability efforts in partner cities.

### **Research Conducted /Consulted to Determine Potential Value and Feasibility of the Proposed Project**

Both Ann Arbor and Bloomington have student research projects underway looking at how students find rental housing and their awareness of energy costs and other sustainability concerns relative to other considerations. The data gathered through these projects, including survey data, will help inform the scoping document and the tool we hope will be developed as a result of this study. These surveys may also be used to develop baseline data in other partner cities.

We have also spoken with our collaborating cities and found that tools to search for rental housing in each city are lacking in general, with a particular dearth of information about the sustainable elements of such housing. Existing tools may include some portion of the data desired, but they are inconsistent, sometimes requiring properties to pay for inclusion (so they function more as advertisements) or claiming to contain data on sustainability-related factors while not actually doing so.

Partner cities have also discussed the proposed project with their university counterparts and other stakeholders. Universities have expressed particular interest in developing a tool like this, with several expressing interest in helping to develop it with the resources at their disposal. Interested universities are listed in the Appendix.

In addition to meeting with partner cities during the USDN Annual Meeting, we held a conference call with eight of the partner cities and to identify key leadership roles among partners and key local resources for

interviews. There is universal interest among partner cities and we are identifying local app developers in universities and the private sector.

Finally, we have had discussions on the cost of development, and have found that development costs for a tool like this can range from negligible to very high. This project will further explore the expense involved and develop general expectations on specific anticipated costs.

### **Key Tasks Involved**

This grant will fund a temporary employee for 6-8 months to work with core USDN partner cities and target populations. This individual will conduct interviews and feedback sessions with all partner cities, explore regional and national resources, and review relevant data and research. Ultimately, these activities will be focused on answering the following questions, several of which were added based on comments received from the Innovation Fund committee in response to our Letter of Intent. We are grateful for this insight.

- 1) Gauging interest and establishing stakeholders – (already in process)
  - a) Is this tool of interest to core member communities? – YES
  - b) Is the proposed tool of interest to student populations in partner communities?
  - c) Are there university, utility, property management, or other partners that should be included in the development of the tool? – (Several core partners have been identified but the project is expected to uncover additional partners)
- 2) Developing consensus on tool functionality and identifying data sources
  - a) What are the core functions that this tool should have? Map of available housing, search by area, total housing cost (H+T+E), utility (natural gas, electric, water) costs, local green rating, transportation access, recycling/compost availability, bike racks, charging stations; inclusion of non-sustainability related features to ensure broadest interest. Other topics as identified in the process.
    - i) What data are available to support these functions?
    - ii) How do these data sets differ in availability, format, costs of updating across cities? For example, can the tool access utility data in Berkeley, Ann Arbor, and other city and utilities using different public access systems? How can the tool accommodate multiple utility company arrangements, including municipally owned utilities, private utilities that are willing share data, and private utilities that are unwilling to share data?
  - b) Should data be formatted for the tool or should the tool be able to handle different existing data formats based on location?
  - c) What are add-on functions that might exist in select cities based on available data?
  - d) What existing data can be integrated or coordinated? (e.g. Walkscore, rental property/utility databases)
- 3) Tool development
  - a) If the scoping/research phase is successful, what are the options to develop the tool? What are the benefits of using grants, contests, a Request for Qualifications paid for with core city funding, some other combination?
  - b) What is the role of Code for America and other similar efforts, if any?
  - c) Is there an opportunity to host a competitive event, like a hack-a-thon, across multiple cities to engage community members from different cities in the development of the tool?
  - d) Are there existing websites/other resources that might serve as a platform for the tool?
  - e) What are the anticipated costs associated with each of the options?
- 4) Impact
  - a) How can the tool be used to measure behavior change?
  - b) Do students consider green features more frequently using the tool when making housing choices?
  - c) How can the tool be used to make comparisons and strengthen programs and policies across cities?
  - d) Can the tool be used by cities to "push" local suggestions/information out to their users?
  - e) How can the tool engage landlords to report use, the changing nature of information sought by potential renters, and other signs that the tool is impacting the market?

## Project Management

*Project Leadership Team:* Jacqui Bauer (Bloomington IN) - Lead applicant and grantee  
Matt Naud (Ann Arbor), Doug Melnick (Albany), Jennifer Green (Burlington), Brenda Nations (Iowa City)

The Leadership Team will select and supervise the Project Manager (whose duties are specified under project budget), and will consult monthly (or more as needed) with other partner cities.

All partner cities agree to work with staff and the leadership team to identify and gather data, help collect input from other stakeholders (universities, etc.), review and comment on periodic reports, and help identify potential resources to develop the tools.

We believe that there are other partners who will participate pro bono as part of an advisory team. Potential advisors include Center for Neighborhood Technology, AASHE, and ACEEE.

## Progress Measurement: How the team will track progress and evaluate success

We will have biweekly conference calls with the Project Manager and Project Leadership Team; monthly calls with other partner cities.

The team will evaluate the success of the project based on the number of additional partners (cities, technical support, tool developers, etc.) engaged in the course of the grant, the quality of the baseline data collected in partner cities, the strength of the plan that is developed to move the tool forward (based on affordability, simplicity, data availability, technical feasibility, logistical feasibility etc.), and the sources of funding and expertise identified.

## Project Budget

	Months	Total hours	\$/hr	Total
<b>Project manager (temporary staff)</b>	6-8	1000	25	\$25,000
<b>Travel</b>				\$3,000
<b>Total budget</b>				<b>\$28,000</b>

Project manager: Tasks will include interviews, background research (on existing data, web or smart phone platforms, methods of data collection including crowdsourcing, etc.), coordination with stakeholders (partner cities, utilities, technical experts, etc.), funding and technical assessments, report development, some travel.

Travel: 3-4 trips for face-to-face meetings or interviews, data evaluation, etc.

## Timeline

### Month 1

- Interviews with all city participants to develop draft scope of needs/wants
- Develop key research questions for potential users, data owners, app developers
- Focus groups organized and designed

### Month 2

- Focus groups in at least three participants cities with students - may be run by Project Manager or Project Team member to save costs
- Focus Group Summary Report

### Month 3

- Data owner discussions - selected interviews with city staff for rental housing data sources: assessor data, housing inspection data, etc.
- Discussions with select utility providers on available ways to retrieve unit-level data
- Data summary report: type and format of data, frequency of collection, opportunities for crowdsourcing (particularly where utilities are not willing to provide), critical data protection, and data vulnerabilities. See Appendix for example data sources.

### Month 4 - Behavior change and evaluation

- Evaluate additional tool functionalities

- Discuss opportunity to use the tool to push local and national information to users including surveys, incentives, and opportunities to use the tool to receive information from users.

#### Month 5

- Programming discussion - meet with application and web tool developers to discuss current project including app functions, known user issues, known data issues. Develop proposal for project development including recommendations on open source, access to data, competition, cooperative funding, foundations, and other monetization potential. Discussions about integration opportunities with other applications. See list of potential contacts in the Appendix.
- Intellectual property issues, data ownership, data access

#### Month 6 - 7

- Summary report and proposal for project development

#### Month 8 - Annual Meeting

- Build in a day prior to the USDN annual meeting to present report findings to participating cities and identify next steps. May be an opportunity to actually begin developing the tool.

### **Commitment of Participating USDN Members to Use the Outcomes/Products of the Project**

We have assembled a committed team and identified an extensive potential market. Providing consistent and usable information on housing and sustainability to highly transient student populations is an ongoing challenge for college towns and for other cities with significant rental populations. The partners on this proposal are participating because they deal on a daily basis with the challenges presented by rental housing, and see that these challenges are made worse because the information available is of poor quality, maintained by scattered entities and/or missing entirely.

The scoping accomplished by this proposal will help define the specific level of commitment required by each city to make the rental housing tool work long term. In the meantime, each city has committed to participating in project calls and interviews, locating and sharing data, and connecting with local universities and other local resources to maximize the quality of the results.

### **Potential to Benefit Many USDN Members (including consideration of the degree to which the project's design limits its relevance and applicability to smaller or larger cities/counties)**

The 14 partners on this proposal—representing over 460,000 students and making up nearly 20% of USDN's core membership—demonstrate an immediate interest and potential value to members. We believe that this has broader applicability to non-students and possibly lower-income renters.

This is an opportunity to test a big idea that is scaleable across the USDN organization—the varied size of the partner cities (from 42,000 in population to over 800,000) will allow us to assess relevance to both small and large cities. There is also an opportunity to demonstrate whether there is an opportunity to monetize the tool (through app sales) to support USDN and participating city programs. If successful, the marginal cost of participation by additional cities will be small.

### **Plan for Sustaining the Project**

This grant will develop the scoping document that recommends a strategy for development of the tool, including funding options for application development and the long-term strategy to support the project.

### **Contact Information**

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## **APPENDIX**

### **Potential data sources and contacts**

#### **Data sources:**

- Ann Arbor - City Assessor and Housing Inspections, DTE, Water Utility, University of Michigan
- City of Evanston - City Building Department, City Utility Department, Northwestern University Off-campus Housing Manager
- National Grid, Stacey Hughes, Manager, Community & Customer Management
- City of Albany, Department of Buildings and Regulatory Compliance
- Bloomington - Housing & Neighborhood Development; County Assessor, Indiana University
- Other cities: assessors, housing inspection office, building departments, etc.

#### **University partners**

- College of St. Rose (Albany - Mike D'Attilio)
- Indiana University (Bill Brown/Emilie Rex)
- Northwestern University
- State University of New York at Albany (Mary Ellen Mallia)
- University of Michigan
- University of Texas at Austin (Jim Walker)
- Arizona State University School of Sustainability (Michael Schoon)
- State University at Albany - Mary Ellen Mallia, Sustainability Director

#### **Additional sources of expertise:**

- Citizens' Utility Board/C3 (Evanston): consumer watch group behind the CUBEnergySaver.com website and has been working on behavior change through their on-line tool and rewards point system.  
<http://www.citizensutilityboard.org/>
- SR4 (Evanston): Small consulting group that is focusing on behavior change, integrated with technology and may be willing to do some pro-bono work. Their founder is a resident of Evanston and involved in our largest non-profit advocacy group. <http://www.sr4partners.com/>
- AASHE (Association for the Advancement of Sustainability in Higher Education)
- Code for America (Ashley Myers)
- Code for Communities (Jason Lally)
- Craig's List
- Honest Buildings
- Google
- Mobiata (Ann Arbor)
- JouleBug
- WalkScore
- Molly Emerick - Austin Energy Green Building staff member familiar with app commissioning
- App developers
  - Scott Resnick (Madison, [district8@cityofmadison.com](mailto:district8@cityofmadison.com))
  - Greg Tracy (Madison, <http://projects.gregtracy.com/resume>)
  - Josh Ruedin (Austin)